ABSTRACTS OF E-POSTERS

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Impact of *Acalypha indica* (Kuppamenia) Phytochemicals on Glucose-6-Phosphate Dehydrogenase Deficiency: Two Clinical Case Studies

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Abstract

Introduction

Acalypha indica, known as "kuppamenia" in Sinhala, plays a significant role in ayurvedic medicine in Sri Lanka. Despite its medicinal use, certain phytochemicals within the plant have been linked to oxidative stress-induced haemolysis in individuals deficient in glucose-6-phosphate dehydrogenase (G6PD) enzyme activity. However, we know very little regarding those chemicals due to a dearth of literature. Here, we present two cases highlighting the impact of Acalypha indica ingestion on individuals with G6PD deficiency.

Case Presentation

Case 1: A 65-year-old man presented with jaundice, pallor, and haematuria after consuming "Kuppamenia mallum". His peripheral blood picture showed bite cells and Heinz bodies. Positive Brewer's test raised the clinical suspicion of G6PD deficiency. He received blood transfusions during the acute phase and was discharged upon improvement of symptoms. Low levels of G6PD enzyme at the follow-up visit confirmed the diagnosis.

Case 2: A 61-year-old male presented with respiratory distress, jaundice and haematuria, accompanied by peripheral cyanosis and hypotension. He was admitted following four days of continuous ingestion of Acalypha indica. Peripheral oxygen saturation was low, and Heinz bodies were evident in the peripheral blood film. Blotting paper methaemoglobinaemia assessment revealed a level of 70%. Despite optimal medical management, he succumbed to a cardiac arrest on the fourth day of admission.

Discussion and Conclusions

Despite its antioxidant properties, Acalypha indica can precipitate acute haemolysis in G6PD-deficient individuals. Symptomatology and outcomes vary with the amount ingested, underscoring the necessity for research into identifying potentially toxic phytochemicals and their concentrations.

Keywords

G6PD deficiency, Kuppamenia, Acalypha indica, Bite cells, Methaemoglobinaemia